Applic. No.: 09/592,224

## In the Claims:

Claim 1 (amended). A functional monitoring system, comprising:

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a transmitting and receiving station configured to transmit an interrogation code signal; and

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a plurality of transponders each configured to respond to the interrogation code signal upon receiving the interrogation code signal by generating and simultaneously transmitting in temporal synchronization a response signal to said transmitting and receiving station.

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Claim 14 (amended). A method of operating a functional monitoring system having a transmitting and receiving station and a plurality of transponders, the method which comprises:

transmitting an interrogation code signal with a transmitting and receiving station; and

simultaneously, in temporal synchronization, responding with each of a plurality of transponders receiving the interrogation code signal by transmitting a response signal.

Claim 18 (amended). The method according to claim 14, which comprises synchronizing the transponders for transmitting the response signal in synchronization.